In the Claims

1.-23. (Cancelled)

24. (Currently Amended) A process for transmitting data on an optical fiber comprising multiplexing in wavelength signals coming from a plurality of monochrome transmitters, each of which has its own wavelength and a slave local clock, modulating information to be transmitted by a carrier realized per channel, and ~~formatting the~~ reformatting a non-return to zero type formatted, multiplexed signal ~~by~~ to a return to zero type multiplexed signal with an optical gate comprising a slave local clock, wherein each slave local clock from each transmitter is controlled by a synchronization circuit comprising a master clock and a phase locked loop (PLL), said master clock controlling ~~the clock of said optical gate and~~ each slave local clock by using said phase locked loop which supplies the synchronization signal for each of the transmitters.

25. (Currently Amended) The process according to claim 24, further comprising ~~formatting~~ reformatting the data that is common and simultaneous for all carriers.

26. (Currently Amended) The process according to claim 25, wherein the ~~formatting~~ reformatting comprises optimizing the form of the signal as a function of characteristics of propagation of an associated transport means.

27. (Currently Amended) The process according to claim 25, wherein the ~~formatting~~ reformatting comprises optimizing optical parameters of the signal as a function of the characteristics of propagation of an associated transport means.

28. (Currently Amended) The process according to claim 25, wherein the ~~formatting~~ reformatting comprises an operation of stabilizing temporal parameters of data.

29. (Previously Presented) The process according to claim 24, comprising synchronizing streams (pulses) emitted by the transmitters.

30. (Currently Amended) The process according to claim 24, wherein the ~~formatting~~ reformatting comprises aligning the phase of signals generated by the transmitters.

31. (Previously Presented) The process according to claim 30, wherein the aligning is subject to ambient parameters to compensate for temporal signal variations.

32. (Previously Presented) The process according to claim 30, wherein the aligning is subject to ambient parameters to compensate for differences and variations between optical paths.

33. (Previously Presented) The process according to claim 24, wherein each element of the multiplexer is signed before multiplexing by a frequency marker applied on the phase.

34. (Previously Presented) The process according to claim 24, wherein each element of the multiplexer is signed before multiplexing by a frequency marker applied on the amplitude.

35. (Previously Presented) The process according to claim 34, wherein the marker comprises a signal with a predetermined spectrum.

36. (Previously Presented) The process according to claim 34, wherein the marker comprises a signal with a spectrum whose characteristics are a function of disturbances undergone by the signal on a corresponding path.

37. (Previously Presented) The process according to claim 34, wherein characteristics of the marker are determined to disturb a marked signal in such a manner that marking is evanescent during passage through the gate.

38. (Currently Amended) ~~Apparatus~~ An apparatus for transmitting data on an optical fiber comprising[[:]] a plurality of monochrome transmitters, each of which has its own transmission wavelength, with each transmitter having a local slave clock;

a multiplexer;

an optical gate that comprises a local slave clock and that receives multiplexed non-return to zero type formatted signals and a cutting signal produced by a master clock; and

a master clock controlling the slave clocks.

39. (Cancelled)

40. (Previously Presented) The apparatus according to claim 38, further comprising frequency marking circuits for each element of the multiplex.

41. (Previously Presented) The apparatus according to claim 40, wherein each of the frequency marking circuits applies the marking signal onto one of the transmitters.

42. (Previously Presented) The apparatus according to claim 40, wherein each of the frequency marking circuits applies the marking signal onto synchronizer of each path.

43. (Currently Amended) The apparatus according to claim [[39]] 38, wherein the optical gate comprises a detector for each marker to control characteristic of the formatting and adjustment of the phase of a corresponding path.

44. (Currently Amended) The apparatus according to claim [[39]] 38, wherein the optical gate comprises a spectral analyzer for the marker to adjust the phase of each path.

45. (Previously Presented) The apparatus according to claim 38, further comprising an optical converter, a demultiplexer and a clock connected to at least one of the converters.

46. (Currently Amended) A counter-reaction circuit for an apparatus that transmits data on an optical fiber comprising a plurality of monochrome transmitters, each of which has its own transmission wavelength, with each transmitter having a local slave clock~~, and which~~; an automatic controller of each transmitter phase; an optical gate that comprises a local slave clock and that receives multiplexed non-return to zero type formatted signals and a cutting signal produced by a master clock; and a master clock controlling the slave clocks wherein said counter-reaction circuit generates a frequency marker for injecting a disturbing spectral signal of each transmitter ~~comprising~~ and further comprises a detector ~~for~~ of an output signal ~~of a~~ from the optical gate ~~that~~ which acts on [[an]] the automatic controller of each transmitter phase ~~that obtains~~ to produce a selected spectral transformation of each marker.